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Full Material Record

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acrylic resin

Colorless, thermoplastic polymer or copolymer of acrylic acid, methacrylic acid or acrylonitrile. Acrylic resins are a commercially important family of polymers that were first discovered in 1880 by the Swiss chemist Georg W.A. Kahlbaum. Otto Röhm of Germany thoroughly described their production in his doctoral thesis (1901) then later patented the process in 1915. Polymethyl methacrylate was first marketed by Rohm and Haas in Germany in 1927. Acrylics have been sold by Rohm & Haas, ICI in England and DuPont in the U.S. since 1931 as glass substitutes (Plexigum®, Plexiglas®, Perspex® and Lucite®) and as adhesives, varnishes, and paint media (Acryloid® F-10, Lucite® 44, Acryloid® B-72). Magna solvent-soluble acrylic artist paints were first sold in 1949 by Bocour, while Liquitex, an acrylic emulsion paint, was first marketed in 1954. The first acrylic fiber, Orlon®, was introduced in 1950. Acrylic resins range from soft, tacky materials to hard solids. They are glossy, optically clear, and have good shock and water resistance. They are stable to outdoor weathering and resistant to chemicals including by mild acids and bases. Acrylics are used as paints, coatings, adhesives, fabrics, textile and leather finishes, windows, mounts, and for molded household amenities.

acrylics; acrylate; methacrylate; Plexigum® [Rohm & Haas]; Lucite® [DuPont]; Paraloid® [Rohm & Haas]; Elvacite® [DuPont]; Plexiglas® [Rohm & Haas]; Perspex®; Magna [Bocour]; Liquitex [Permanent Pigments]; Shiva [Shiva]; Hyplar [Grumbacher]; Aqua-tec [Bocour]

Composition:	CAS#:	Mohs hardness:	
Other properties:	Density:	Refractive index:	
Melting point (C):	Boiling Point (C):		

Analysis:

Soluble in mineral spirits, turpentine, aromatic hydrocarbons, chlorinated hydrocarbons, esters, and ketones. Insoluble in water, ethanol.

Hazards:

Combustible, but often self-extinguishing or slow burning. Monomer is irritating to eyes and skin. Inhalation may cause headaches, irritability and narcosis.

References and additional information:

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EXHIBITIONS + COLLECTIONS + CONSERVATION +							
PROGRAMS → INFORMATION →	acrylate						
PRESS ROOM F	An ester of acrylic acid. Most acrylates are used as monomers for the manufacture of acrylic resins.						
SEARCH .							
014=1	Synonyms:						
SMFA NCAAA				,			
	Composition:	CAS	#:	Mohs hardness:			
	Other properties:	Dens	ity:	Refractive index:			
	Melting point (C):		Boiling Point (C):				
	Analysis:	AUL-1					
	Hazards:						

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